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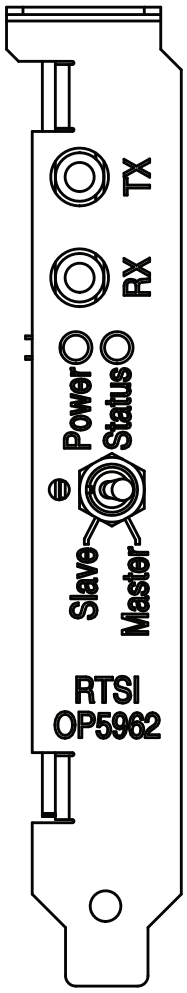


# OP5962 RTSI to LVDS Transceiver Module

# User Manual

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# OP5962 RTSI TO LVDS TRANSCEIVER

## DESCRIPTION

The OP5962 RTSI-LVDS transceiver is designed to synchronize signals between chassis by sending synchronization pulses from master to slave (an RTSI signal leaves the chassis, is converted to LVDS to reduce noise during transmission and enters into the next chassis as RTSI).

The OP5962 that is designated as Master receives its pulse from the FPGA. The master sends the signal to the slave which can then transmit to the next Slave (depending on the hardware configuration)

### FEATURES

- Operating mode switch
- 3.5 mm audio connector (for OP5962).
- 2 Status LEDs (power and clock activity). These light when a model with an FPGA I/O synchronization is running in real time (indicates good synchronization between FPGA and I/Os)

## INSTALLATION

The OP5962 RTSI-LVDS transceiver must be factory installed in the OP5600 at the time of system configuration.

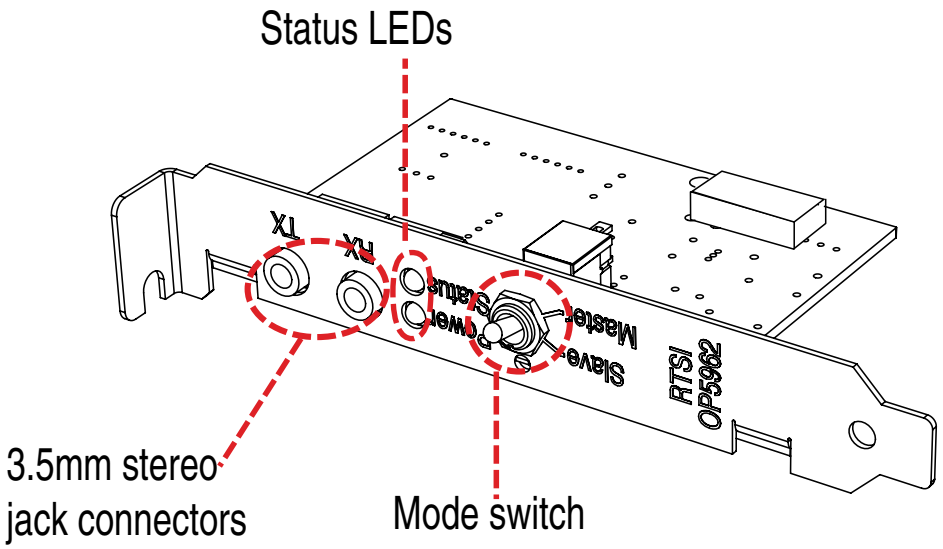


Figure 1: OP5962 interface

# CABLING

Depending on the configuration, the OP5962 (when installed in an OP5600) can act as a master or slave synchronization module. The following images provide examples of connection configurations.

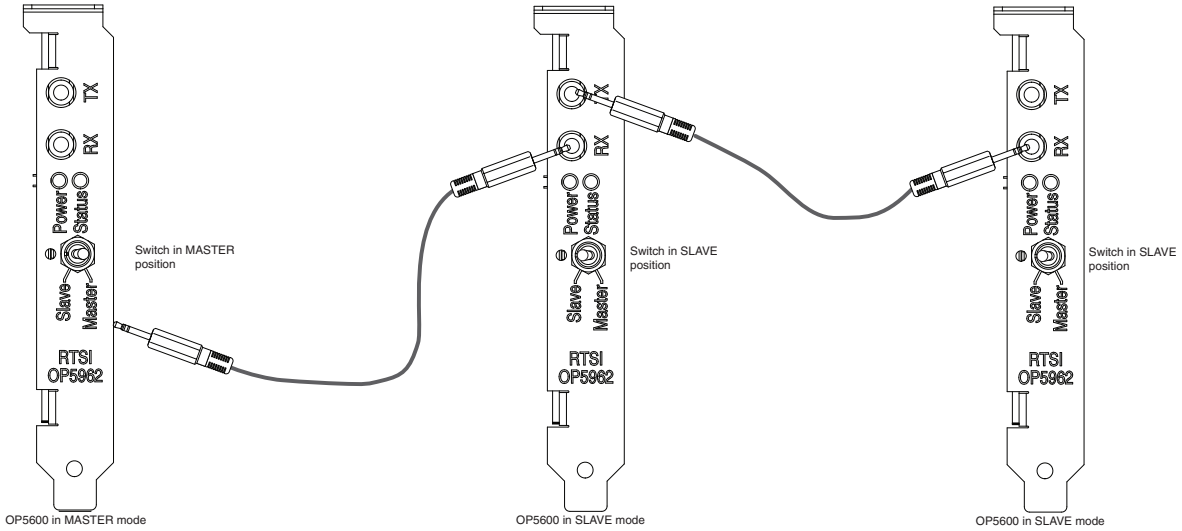


Figure 2: Connection example, three OP5600

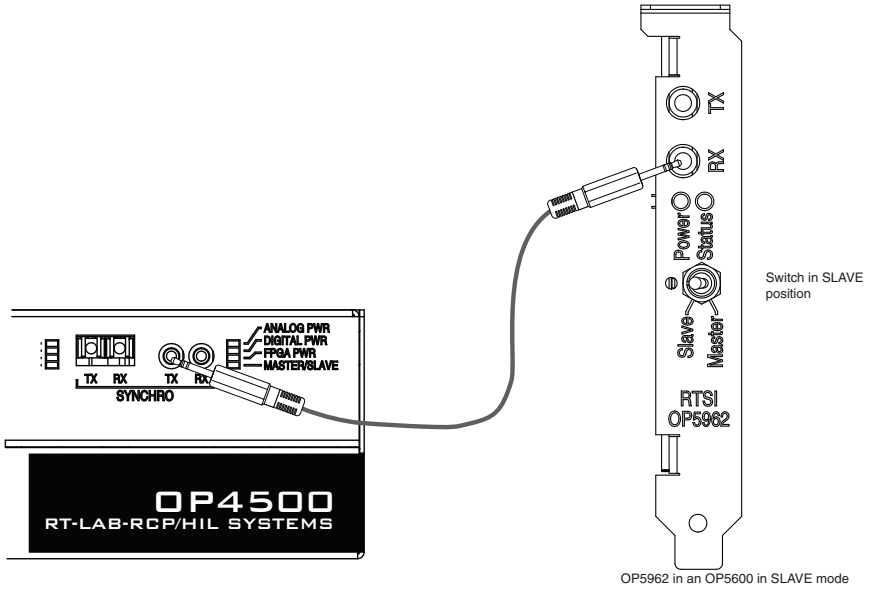


Figure 3: Connection example, one OP5600 and one OP4500

## RT-LAB CONFIGURATION

The OpCtrl block in RT-LAB must be configured with the appropriate synchronization mode (MASTER, SLAVE). Select Master or Slave in the “Synchronization mode” field.

Remaining parameter in this window are determined according to the chassis and the type of FPGA.

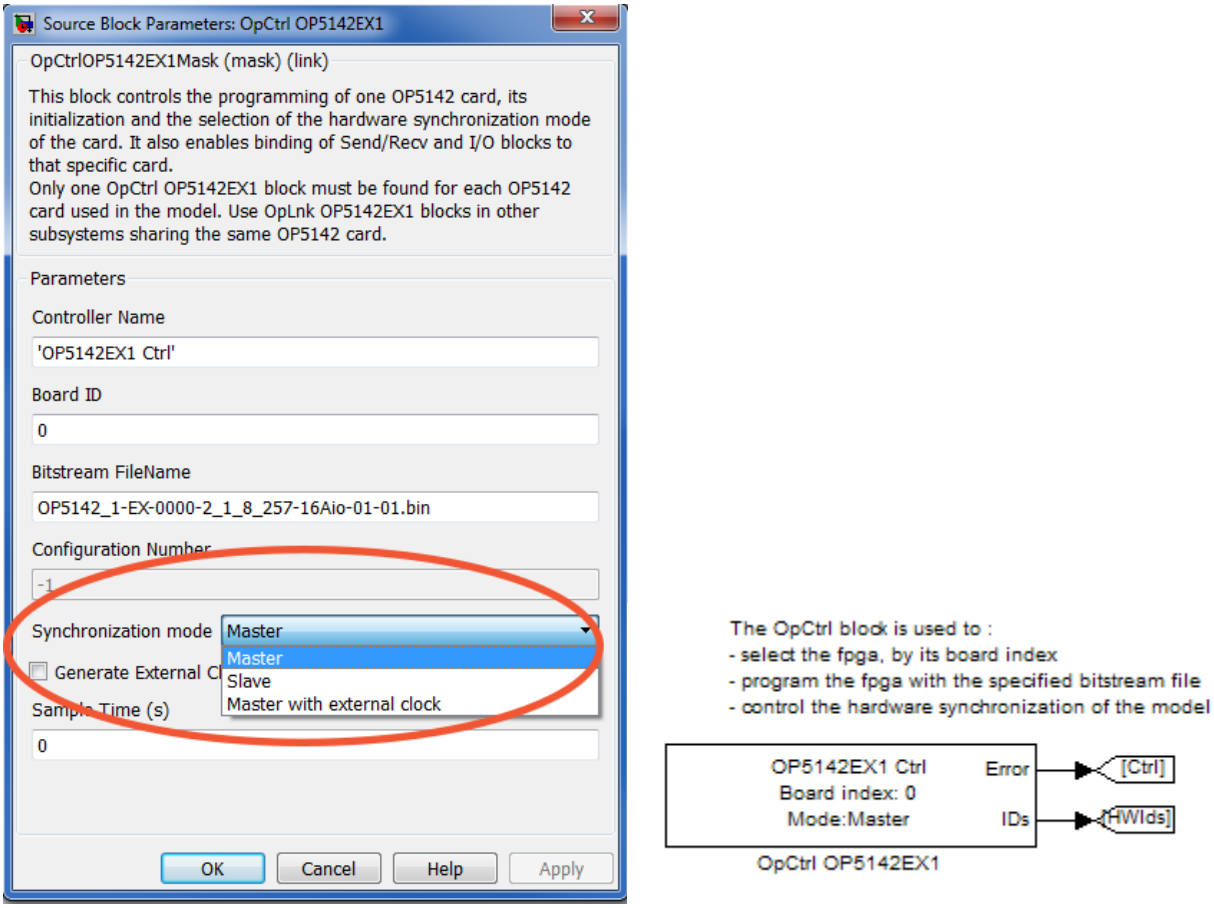
Source Block Parameters: OpCtrl OP5142EX1
OpCtrlOP5142EX1Mask (mask) (link)
This block controls the programming of one OP5142 card, its initialization and the selection of the hardware synchronization mode of the card. It also enables binding of Send/Recv and I/O blocks to that specific card.
Only one OpCtrl OP5142EX1 block must be found for each OP5142 card used in the model. Use OpLnk OP5142EX1 blocks in other subsystems sharing the same OP5142 card.
Parameters
Controller Name
'OP5142EX1 Ctrl'
Board ID
0
Bitstream FileName
OP5142_1-EX-0000-2_1_8_257-16Aio-01-01.bin
Configuration Number
-1
Synchronization mode
Master
Master
Slave
Master with external clock
Generate External Cl
Sample Time (s)
0
OK
Cancel
Help
Apply
The OpCtrl block is used to :
- select the fpga, by its board index
- program the fpga with the specified bitstream file
- control the hardware synchronization of the model
OP5142EX1 Ctrl
Board index: 0
Mode:Master
Error
IDs
[Ctrl]
[HWIds]
OpCtrl OP5142EX1

Figure 4: OpCtrl block synchronization parameters

## SPECIFICATIONS

| **Product name** | **OP5962** |
|---|---|
| Part number | 126-0421 |
| Product type | OP5600 external synchronization transceiver |
| Power | Supplied by chassis |
| Dimensions | 8.75 x 7.64 cm (3.44 in x 3.0 in) |
| I/O connector | 3.5mm audio |
| Operating temperature | 10 to 40 °C (50 to 104°F) |
| Storage temperature | -55 to 85°C (-67 to 185°F) |
| Relative humidity | 10 to 90%, non condensing |
| Maximum altitude | 2,000 m (6562 ft.) |

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